# SERVICE INSTRUCTION

## Single-Hung Balance Replacement

**These instructions apply to:**

Pella® 150 Series 2020 - Current
ThermaStar by Pella® 2015 - 01/2022
Encompass by Pella® 2015 - Current
SH with Constant Force Balance

**Tools Required:**

- Screwdriver (flat and Phillips)
- Scissors
- Paper template (included)
- Cut resistant gloves
- Hook tool
- Utility knife
- Side cutters
- Mr. Clean Magic Eraser® (optional for cleaning vinyl)



**Balance Replacement Kit - Quantity of kit parts supplied will vary based on window size and color.**

**Note:** Remember to work safely while doing any maintenance or repair. This includes wearing safety glasses and using safe work practices. Make sure your work area is unobstructed and clear of window coverings, etc..

**Note:** When Printing the template; make sure the printer page scaling is set to "None" or page sizing is set to "Actual."

**Note:** Whenever the balances on 2015 - 07/2025 vintage single-hung windows are replaced, the locking pivot bars must also be replaced.

## 1 Sash Removal:

A. **Unlock the window and raise the lower sash** approximately 4 to 5 inches. Slide the tilt release tabs inward, these are located at the top of the sash.




B. **Pull the top of the sash** toward you until the sash is perpendicular to the frame.




C. **Grasp the sash near the frame, and lift straight up on one side** until the locking pivot bar of the sash can be released from the bottom of the sash balance. Lift the locking pivot bar out of the sash balance and continue to lift the sash up until the locking pivot bar is released from the opposite side of the sash and can be removed from the bottom of the balance. Lift the sash up and out of the window frame. Set it aside in a safe location.




© 2025 Pella Corporation

GIF-000003067- Part Number: V989881

# 2 Frame Cutting:

*07/2025 - Current Vintage Balance*
*2015 - 07/2025 Vintage Balance*

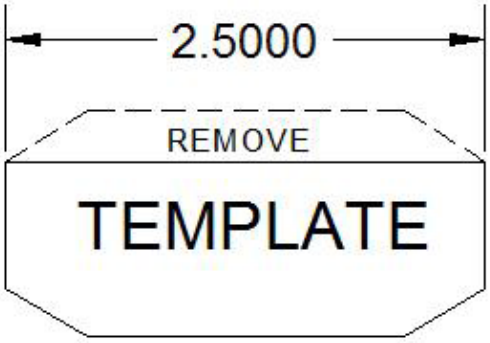
A. **Slide the sash stop down** and pry off with a flat blade screwdriver.



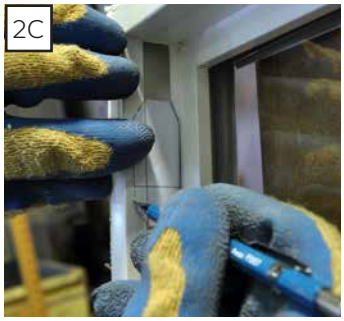




B. **Cut out template**.




C. **Align with current notch in unit** and mark edge to be cut.







D. **While wearing cut resistant gloves,** cut the top and bottom angles marked off by the template.

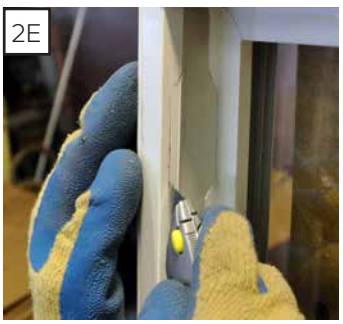






E. **Score straight edge 5-10 times** until knife cuts through one extrusion layer and remove material.







© 2025 Pella Corporation

# 3 Balance Removal (continued):

*2015 - 07/2025 Vintage Balance*

A. **While pressing down against force of balance,** twist balance terminal 90 degrees with screwdriver to release brake, slowly move the balance assembly up to the balance clip.







B. **Place a pencil mark on the frame** aligned with the bottom of the balance brake.







C. **Remove screw from metal or plastic balance clip.** Discard this screw, it cannot be used in the replacement balance clip.







D. **Use a utility knife to cut approximately 1/4" off each side wing of the carrier**. Use the edge of the balance channel as a guide when cutting each side.







E. **Slide the balance clip and carrier** (balance housing) up to the notch.




© 2025 Pella Corporation

# 3 Balance Removal (continued):

*2015 - 07/2025 Vintage Balance*

F. **For best removal results use a straight blade screwdriver to pry the clip up** off the top of the balance housing and then balance housing out of the balance pocket channel.

**Slide the carrier down out of the way.** If the carrier will be re-used, now is a good time to make sure the pile weatherstrip on each side is in place.













G. **Use a flat blade screwdriver to pry the balance attachment clip** and the coils out of the balance pocket channel.

**Note:** The balance attachment clip and coils may be disassembled when removing from the channel.











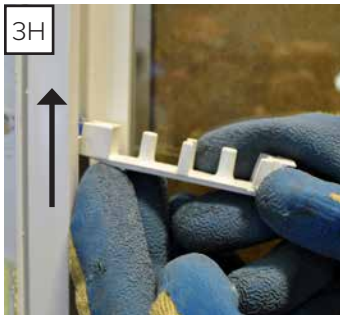








H. **If the carrier is to be replaced;** Slide the carrier (balance housing) up out of the balance pocket channel.



# 4 Balance Removal:

*07/2025 - Current Vintage Balance*

A. **Use a straight blade screwdriver and raise the brake up to the balance clip** in the balance channel. Remove the clip attachment screw(s).







B. **Use a straight blade screwdriver and raise the brake up to opening** in the balance pocket channel and twist the balance terminal 90 degrees to  lock it into position with the clip in the opening so it can be accessed for removal.







C. **Use a straight blade screwdriver to pry the clip from the top coil.** Then continue to pry the clip to remove hook on the top of the clip from the metal coil(s) hole(s) and remove the clip from the channel.



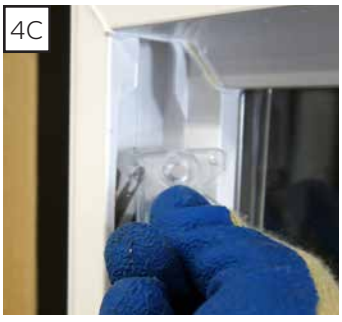
















© 2025 Pella Corporation

# 4 Balance Removal (continued):

*07/2025-Current Vintage Balance*

D. **Use a straight blade screwdriver and raise the brake up to opening** in the balance pocket channel and twist the balance terminal 90 degrees to lock it into position with the clip in the opening so it can be accessed for removal.







**Note:** Each coil consists of a metal coil sandwiched between a front and back plastic cover. It typically is removed in separate steps and in pieces.

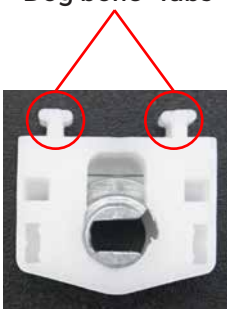
E. **Use a small straight blade screwdriver and a hook tool to pry the cover from the coil.** When the cover starts to move, work the cover off the lower coil (or brake) by "walking" the cover grooves off the 'dog bone' shaped tabs. The cover may break. Continue to pry the front cover until it is removed or broken off.

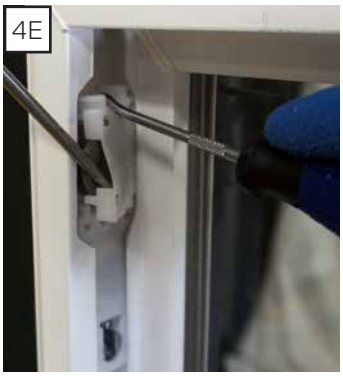






'Dog bone' Tabs





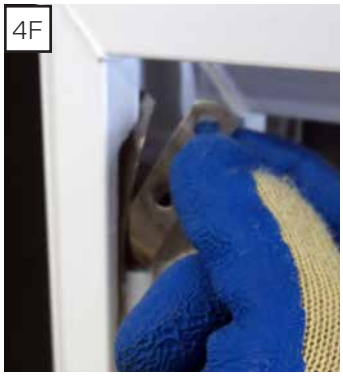






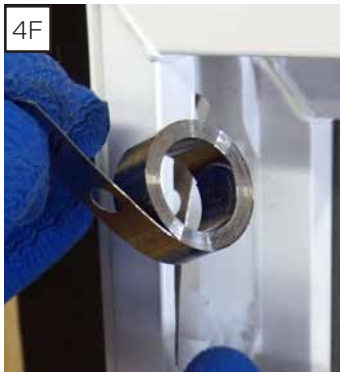

F. **Use a small straight blade screwdriver to pry the coil tail out of the balance channel**. Grasp the coil tail and pull the coil out of the coil housing and out of the balance channel.










© 2025 Pella Corporation

# 4 Balance Removal (continued):

*07/2025-Current Vintage Balance*

G. **If there is any remaining pieces of the front of the cover, pry as needed** to remove it from the balance channel.




H. **If possible, the back of the cover may be removed now.** Otherwise, the brake may need to be re-positioned and remove the next coil first as shown in the following steps.

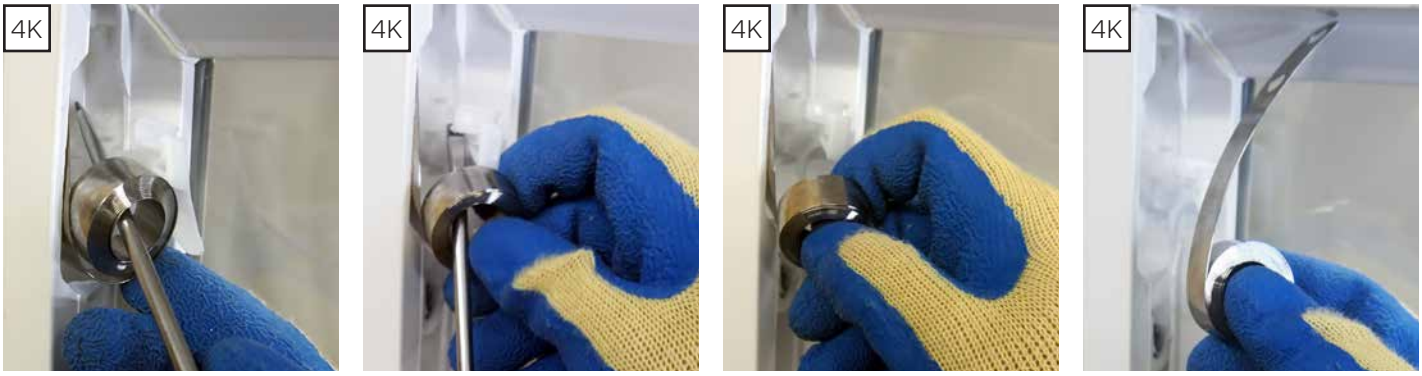
I. **Reposition the brake**, to access the next coil for removal.




J. **Use a small straight blade screwdriver and a hook tool to pry the cover from the next coil.** The cover will most likely break. Push the cover out of the way.




K. **Use a flat blade screwdriver to pry the coil out of the housing** and remove it from the balance channel.




© 2025 Pella Corporation

# 4 Balance Removal (continued):

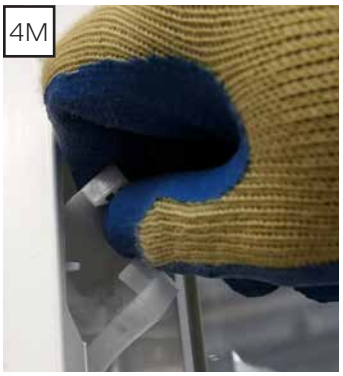
*07/2025-Current Vintage Balance*

L. **Reposition the brake as needed** to access the back pieces of the coil covers.




M. **Use a hook tool to hook the back of the coil housing** and pull it out of the balance channel.







N. **Use a straight blade screwdriver to pry the remaining housing back** and brake out of the balance channel.
















© 2025 Pella Corporation

# 5 Balance Removal:

*Previously Replaced Balance with 07/2025-Current Vintage*

A. **Remove the clip attachment screws.** These screws may be reused on new replacement balance clip.





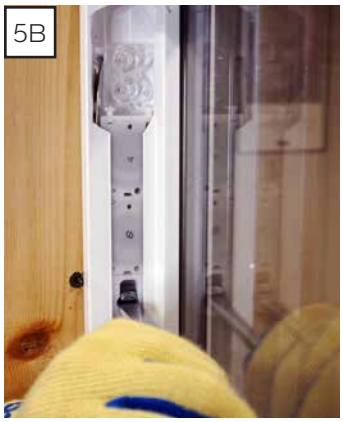


B. **Use a straight blade screwdriver and raise the brake up to the opening in the balance pocket channel** and twist the balance terminal 90 degrees to lock it into position with the clip in the opening so it can be accessed for removal.










C. **Use a straight blade screwdriver to pry the clip from the top coil**. Then continue to pry the clip to remove hook on the top of the clip from the metal coil(s) hole(s) and remove the clip from the channel.
















© 2025 Pella Corporation

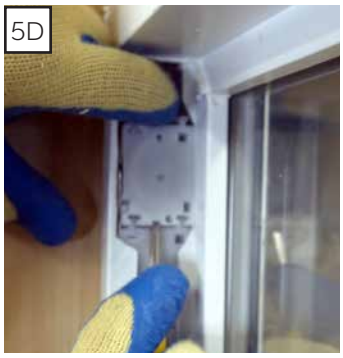
# 5 Balance Removal (continued):

*Previously Replaced Balance with 07/2025-Current Vintage*

D. **Use a small straight blade screwdriver and a hook tool to pry the cover from the coil.** When the cover starts to move, work the cover off the lower coil (or brake) by "walking" the cover grooves off the 'dog bone' shaped tabs. Continue to pry the cover until it is removed.

**Note:** Each coil consists of a metal coil sandwiched between a front and back plastic cover. It typically is removed in separate steps.











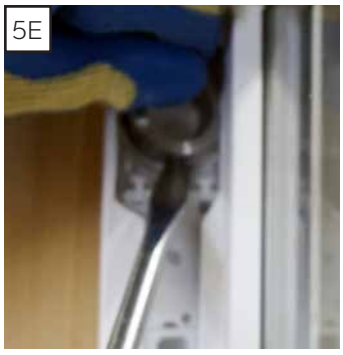







E. **Use a straight blade screwdriver to pry the coil out of the balance channel**.










F. **Use a small straight blade screwdriver to pry the back of the coil cover out of the balance channel**.








© 2025 Pella Corporation

# 5 Balance Removal (continued):

*Previously Replaced Balance with 07/2025-Current Vintage*

G. **Reposition the brake** to access the next coil for removal.







H. **Use a small straight blade screwdriver and a hook tool to pry the cover from the coil**. When the cover starts to move, work the cover off the lower coil (or brake) by "walking" the cover grooves off the 'dog bone' shaped tabs. Continue to pry the cover until it is removed.





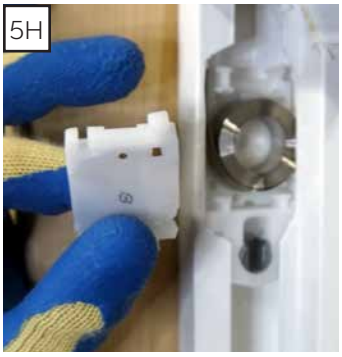











I. **Use a straight blade screwdriver to pry the coil out of the balance channel**.










© 2025 Pella Corporation

# 5 Balance Removal (continued):

*Previously Replaced Balance with 07/2025-Current Vintage*

J. **Use a straight blade screwdriver to pry the coil out of the balance channel**.




K. **Use a small straight blade screwdriver to pry the back of the coil cover out of the balance channel**.













L. **Twist balance terminal 90 degrees with screwdriver to release brake,** move the brake and then pry it out of the balance channel.
















© 2025 Pella Corporation

# 6 Balance Installation:

*Single Coil*

A. **When installing the brake into the balance channel,** make sure it is inserted as shown. If not inserted as shown, the sash terminal pin will not fit into the terminal.

*Insert the brake like this!*



**CORRECT**

*DO NOT insert the brake like this!*



**INCORRECT**

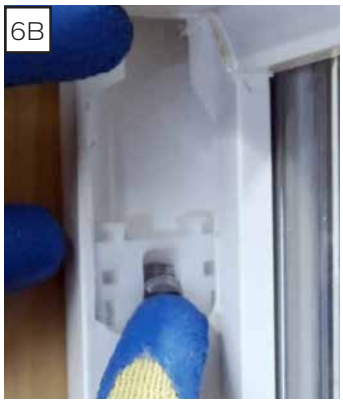
B. **Insert the brake into the balance channel as shown**.










C. **Position the brake in the channel opening with the 'dog bone' shaped tabs visible in the opening** so they can be accessed, and the next coil can be positioned on top of it. Use a screwdriver to turn the terminal to 'lock' the brake in place.







D. **Thread the cord through the bottom hole in the metal of the coil**.













© 2025 Pella Corporation

# 6 Balance Installation (continued):

*Single Coil*

E. **Insert the coil into the balance channel with the slots in the coil aligned with the 'dog bone' shaped tabs** in the brake. Make sure the coil metal of the coil is on the roomside (the interior) of the balance channel. This is so when the sash is lowered the coil metal is not visible in the channel from the interior.








F. **Grasp the cord and pull it tight** while pushing the coil completely onto the brake.








G. **Use a screwdriver to turn the terminal** to unlock the brake and move it down into the channel to a position so the 'dog bone' shaped tabs are just sticking up above the opening and then 'lock' the brake in place.






H. **While pulling on the cord to keep the cord out of the balance channel,** insert the clip into the balance channel and position it on top of the coil cover and work it into the channel to hook the clip into the coil metal top hole.








© 2025 Pella Corporation

# 6 Balance Installation (continued):

*Single Coil*

I. **A small flat bladed screwdriver may be used to help move and position the clip** into the metal and on top of the coil housing as shown.












This view shows how the clip is to be positioned on top of the coil cover and hooked into the coil metal.

J. **Once the clip and coil are both positioned in the channel,** pull the cord out of the bottom hole of the coil metal.




K. **Measure 1-1/8" up from the line marked on the frame placed there is step 2C**.







L. **Use a screwdriver to turn the terminal to unlock the brake and move it down into the channel** to a position so the bottom of the balance brake is aligned with the top line 1-1/8" above the line marked in step 2C. Turn the terminal to lock the balance in place.










© 2025 Pella Corporation

# 6 Balance Installation (continued):

### *Single Coil*

M. **Install the clip attachment screws provided** in the balance replacement kit. DO NOT re-use the screw from the clip of the balance being replaced.









### *Two or Three Coil Balances*

**NOTE:** Two and three coil balances are installed in the same manner as single coil, only additional coils are stacked onto the first coil inserted into the channel. The cord is threaded through the bottom hole of each subsequent coil added.

N. **Insert the brake into the balance channel as shown**.













O. **Position the brake in the channel opening with the 'dog bone' shaped tabs visible** in the opening so they can be accessed, and the next coil can be positioned on top of it. Use a screwdriver to turn the terminal to 'lock' the brake in place.







P. **Thread the cord through the bottom hole** in the metal of the coil.







© 2025 Pella Corporation

# 6 Balance Installation (continued):

*Two or Three Coil Balances*

Q. **Insert the coil into the balance channel with the slots in the coil** aligned with the 'dog bone' shaped tabs in the brake. Make sure the coil metal of the coil is on the roomside (the interior) of the balance channel. This is so when the sash is lowered the coil metal is not visible in the channel from the interior.







R. **Make sure the cord is out of the way** while pushing the coil completely onto the brake.










S. **Use a screwdriver to turn the terminal to unlock the brake** and move it down into the channel to a position so the 'dog bone' shaped tabs are just sticking up above the opening and then 'lock' the brake in place.










T. **Thread the cord through the bottom hole** in the metal of the next coil.







© 2025 Pella Corporation

# 6 Balance Installation (continued):

*Two or Three Coil Balances*

U. **Insert the coil into the balance channel with the slots in the coil** aligned with the 'dog bone' shaped tabs on the top of the coil housing of the just installed coil. Make sure the coil metal of the coil is on the roomside (the interior) of the balance channel.







V. **Make sure the cord is out of the way** while pushing the coil completely onto the brake.










W. **Use a screwdriver to turn the terminal to unlock the brake and move it down** into the channel to a position so the 'dog bone' shaped tabs are just sticking up above the opening and then 'lock' the brake in place.










**NOTE:** If installing a 3-coil balance, repeat steps 3T-3W on the third coil.

X. **While pulling on the cord to keep the cord out of the balance channel,** insert the clip into the balance channel and position it on top of the coil cover and work it into the channel to hook the clip into the coil metal top hole. A small flat bladed screwdriver may be used to help move and position the clip into the metal and on top of the coil housing as shown.










© 2025 Pella Corporation

# 6 Balance Installation (continued):

*Two or Three Coil Balances*

Y. **Once the clip ins positioned on top of all the coils in the channel,** pull the cord out of the bottom hole of the coil metal.




Z. **Measure 1-1/8" up from the line marked on the frame** placed there is step 2C.







AA. **Use a screwdriver to turn the terminal to unlock the brake** and move it down into the channel to a position so the bottom of the balance brake is aligned with the top line 1-1/8" above the line marked in step 2C. Turn the terminal to lock the balance in place.







BB. **Install the clip attachment screws provided in the balance replacement kit.** DO NOT re-use the screw from the clip of the balance being replaced.

**WARNING** **Must use new clip attachment screws provided in balance replacement kit (slightly longer in length).**












© 2025 Pella Corporation

# 6 Balance Installation (continued):

*Two or Three Coil Balances*

CC. **If needed, use a Magic Eraser® to clean any marks on the vinyl from the replacement process**.







DD. **Replace sash stop at the top of balance channel** with short length sash stop or use long length sash stop to cover entire notch. (Both stops are provided.)







**Installing Short Sash Stop**



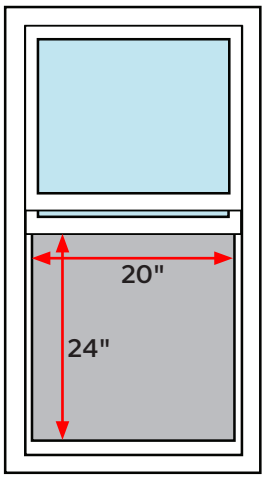







**Installing Long Sash Stop**

**NOTE:** Longer sash stops my impact egress capability. If using longer sash stops - confirm all egress requirements are met. The International Building Code requires 20" clear opening width, 24" clear opening height, and 5.7 $ft^2$ of clear opening area above the ground floor or 5.0 $ft^2$ of clear opening area on the ground floor. Check local codes for compliance.




© 2025 Pella Corporation

# 7 Locking Pivot Bar Replacement:

*2015-07/2025 Vintage SH Windows*

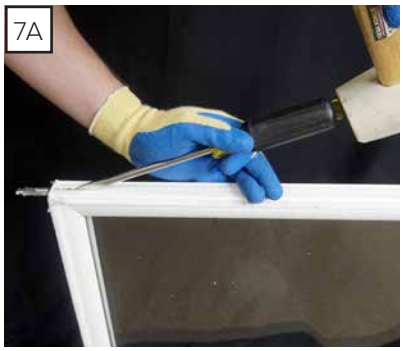
**WARNING** **Whenever the balances on 2015-6/2205 vintage single-hung windows are replaced, the locking pivot bars must also be replaced. The end of the replacement pivot bar will have a line as shown.**





A. **Use a flat blade screwdriver and a mallet** to tap and remove the locking pivot bar from one side of the sash.







B. **Use a mallet to tap in the new locking pivot bar** on one side of the sash.










C. **Repeat 6A-6B on the other side of the sash**.



# 8 Sash Installation:

A. **Install the sash.** Tilt one end of the sash up and insert the sash into the frame. Place the pivot bar on one side of the sash into one of the balance shoes, then lower opposite end of the sash into the other balance shoe. Make sure the pivot bars are completely seated in the shoes by lightly tapping the sash near the pivot bar locations.




**Locking pivot bar in the balance shoe of a field replaced constant force balance**



B. **Tilt the sash up and make sure the release tabs are in the channel.** Test the operation of the sash by raising and lowering it a few times. Close and lock the sash.










© 2025 Pella Corporation